

CHAMPOLLION: A **NASA/CNES** SURFACE SCIENCE PACKAGE
FOR ROSETTA

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NASA and CNES are proposing one of two surface science packages to a comet for Rosetta. A prioritized list of science objectives has been developed to optimize science return within project constraints on cost, mass, etc. The highest science priorities are to study the elemental and molecular composition of a sample from 10-20 cm below the surface. Further objectives include the study of mineralogical and isotopic composition, and physical and large scale properties of the comet. A nominal design has been made of a lander with accommodation of a representative payload. The actual payload will be selected in an open AO process. Champollion will land during the inactive phase of the comet prior to perihelion. Data from the orbiter's instruments will characterize the comet prior to landing. All science experiments are completed once within the first 24 hours. The data is transmitted to the orbiter for prompt relay to Earth. Resources are available for a repeat of the science sequence should this be necessary or desirable. The lander will have limited telecommand capability and the mission is completed 84 hours after landing. The total mass of the lander is 41.9 kg, with an additional 7.5 kg of support equipment on the orbiter. Delivery to ESA occurs in August 2001. The final sharing between NASA and CNES and more detailed planning is being carried out prior to the submission of the final proposal to ESA in November 1995.

Submittal Information:

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5. Oral
6. N/A |
| 2. PS9 | |
| 3. J. Klinger | |